CLAIMS

I/We claim:

1. An encoder for compressing image information comprising:

a memory configured to store a predefined compression code corresponding to one of white image data and black image data; and

a processor configured to receive image data including a first sequence of characters representing an image, to read a first character in the first sequence of characters, to determine that the read first character corresponds to the one of the white and the black image data, to read one or more characters occurring immediately subsequent to the first character in the first sequence of characters, to determine that the read one or more characters match the read first character, to generate a second sequence of characters, including the stored predefined compression code, representing the matching one or more characters.

2. An encoder according to claim 1, wherein:

the stored predefined compression code is a first predefined compression code and corresponds to the white image data;

the memory is further configured to store a second predefined compression code corresponding to the black image data;

the received image data includes a third sequence of characters representing the image; and

the processor is further configured to read a first character in the third sequence of characters, to determine that the read first character in the third sequence of characters represents the black image data, to read one or more characters occurring immediately subsequent to the read first character in the third sequence of characters, to determine that the read one or more characters in the third sequence of characters match the read first character in the third sequence of characters, to generate a fourth sequence of characters, including the stored second predefined

17 compression code, representing the matching one or more characters

18 in the third sequence of characters.

1 3. An encoder according to claim 1, wherein:

2   the memory is further configured to store a threshold value;

3 and

4   the processor is further configured to determine if a value

5 corresponding to the number of characters in the matching one or

6 more characters is equal to or greater than the threshold value,

7 and to generate the second sequence of characters only if the

8 corresponding value is equal to or greater than the stored

9 threshold value.

1 4. An encoder according to claim 1, wherein:

2   the processor is further configured to generate the second

3 sequence of characters so as to include a value corresponding to

4 the number of characters in the matching one or more characters.

1 5. An encoder according to claim 1, wherein:

2   the second sequence of characters has a predefined bit length

3 and further includes a continuation code; and

4   the processor is further configured to generate a third

5 sequence of characters, excluding the stored predefined compression

6 code, further representing the matching one or more characters.

1 6. An encoder according to claim 5, wherein:

2   the processor is further configured to combine the second and

3 the third sequences of characters to represent the matching one or

4 more characters.

1 7. A method for compressing image information comprising:

2   receiving a first sequence of characters representing an

3 image;

4   reading a first character in the first sequence of

5 characters;

6   determining that the read first character represents one of a
7   white and a black portion of the image;
8   reading one or more of the characters occurring immediately
9   subsequent to the first character in the first sequence of
10 characters;
11   determining that the read one or more characters in the first
12 sequence of characters match the read first character in the first
13 sequence of characters; and
14   representing the matching one or more characters in the first
15 sequence of characters with a second sequence of characters
16 including a predefined compression code and corresponding to the
17 one of the white and the black portion of the image.

1   8. A method according to claim 7, wherein the read first character
2   represents the white portion of the image and the compression code
3   is a predefined first compression code, and further comprising:
4   receiving a third sequence of characters representing the
5   image;
6   reading a first character in the third sequence of characters;
7   determining that the read first character in the third
8   sequence of characters represents the black portion of the image;
9   reading the one or more characters occurring immediately
10 subsequent to the first character in the third sequence of
11 characters;
12   determining that the read one or more characters in the third
13 sequence of characters match the read first character in the third
14 sequence of characters; and
15   representing the matching one or more characters in the third
16 sequence of characters with a fourth sequence of characters
17 including a predefined second compression code corresponding to the
18 black portion of the image.

1   9. A method according to claim 7, further comprising:

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2   determining if a value corresponding to the number of
3   characters in the matching one or more characters is equal to or
4   greater than a threshold value;
5   wherein the matching one or more characters are represented by
6   the second sequence of characters only if the corresponding value
7   is equal to or greater than the threshold value.

1   10. A method according to claim 9, wherein the threshold value is
2   defined prior to the reading of the first character of the first
3   sequence of characters.

1   11. A method according to claim 7, wherein:
2   the second sequence of characters further includes a value
3   corresponding to the number of characters in the matching one or
4   more characters.

1   12. A method according to claim 7, wherein the second sequence of
2   characters has a predefined bit length and further includes a
3   continuation code, and further comprising:
4   further representing the matching one or more characters with
5   a third sequence of characters, excluding the predefined
6   compression code.

1   13. A method according to claim 12, further comprising:
2   combining the second and the third sequences of characters to
3   represent the matching one or more characters.

1   14. An imaging system comprising:
2   a raster image processor configured to receive a first
3   sequence of characters representing an image and to convert the
4   first sequence of characters into a second sequence of characters
5   including a predefined compression code for one of white image data
6   and black image data; and
7   an imager controller configured to receive the second sequence
8   of characters representing the image and to covert the second

9   sequence of characters into the first sequence of characters based

10 on the predefined compression code.

1   15. An imaging system according to claim 14, wherein:

2   the raster image processor is further configured to store the

3   predefined compression code, and to covert the first sequence of

4   characters by reading a first character in a first sequence of

5   characters, determining if the read first character represents the

6   one of the white and the black image data, if so, reading one or

7   more characters occurring immediately subsequent to the first

8   character in the first sequence of characters, determining if the

9   read one or more characters match the read first character, and, if

10 so, generating the second sequence of characters to represent the

11 matching one or more characters.

1   16. A system according to claim 14, wherein:

2   the predefined compression code is a first predefined

3   compression code and corresponds to the white image data;

4   the raster image processor is further configured to receive a

5   third sequence of characters representing the image and to covert

6   the third sequence of characters into a fourth sequence of

7   characters including a second predefined compression code

8   corresponding to the black image data; and

9   the imager controller is further configured to receive the

10 fourth sequence of characters representing the image and to covert

11 the fourth sequence of characters into the third sequence of

12 characters based on the second predefined compression code.

1   17. A system according to claim 14, wherein:

2   the raster image processor is further configured to determine

3   if a value corresponding to the number of characters in the first

4   sequence of characters is equal to or greater than a threshold

5   value, and to generate the second sequence of characters only if

6   the corresponding value is equal to or greater than the threshold

7   value.

1   18. A system according to claim 14, wherein:

2   the raster image processor is further configured to generate

3   the second sequence of characters so as to include a value

4   corresponding to the number of characters in the first sequence of

5   characters.

1   19. An encoder comprising:

2   a memory configured to store a predefined compression code for

3   one of white image data and black image data; and

4   a processor configured to convert a first sequence of

5   characters representing an image into a second sequence of

6   characters including the stored predefined compression code.

1   20. An encoder according to claim 19, wherein:

2   the processor is further configured to convert the first

3   sequence of characters by reading a first character in a first

4   sequence of characters, determine if the read first character

5   represents the one of the white and the black image data, if so,

6   read one or more characters occurring immediately subsequent to the

7   first character in the first sequence of characters, determine if

8   the read one or more characters match the read first character,

9   and, if so, generate the second sequence of characters to represent

10   the matching one or more characters.